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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,993	03/08/2002	Honary Hooman	42390P13490	2606

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER

TRUONG, CAMQUY

ART UNIT	PAPER NUMBER
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2195

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/683,993

Applicant(s)

HOOMAN ET AL.

Examiner

Camquy Truong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-30 are presented for examination.
2. It is noted that although the present application does contain line numbers in the specification and claims, the line numbers in the claims do not correspond to the preferred format. The preferred format is to number each line of every claim, with each claim beginning with line 1. For ease of reference by both the examiner and Applicant all future correspondence should include the recommended line numbering.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1-2, 6-12, 14, 17-20, 23-26 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miro (U.S. Patent 5,220,653) in view of Applicant Admitted Prior Art (AAPA), and further in view of Maeno (U.S. Patent 4,942,569).
5. Miro was cited in the last office action.

6. As to claims 1, 11, 19 and 24, Miro teaches the invention substantially as claimed including a device comprising:

a task scheduler coupled to the port, the task scheduler to generate a task identifier for every data frame received (col.13, lines 60-65);

a first queue coupled to the task scheduler to hold task identifiers of a first priority type (col. 4, lines 50-60; col. 13, line 66 – col. 14, line 9);

a second queue couple to the task scheduler to hold task identifiers of a second priority type, the second priority type different than the first priority type (col. 4, lines 60-65; col. 13, line 66 – col. 14, line 9);

a service coupled to the first and second queues, the service configured to retrieve task identifiers from the first queue and the second queue in a fair manner (col. 3, lines 50-61; col. 7, lines 56-67; col. 14, lines 10-22); and

a third queue (service queue, col. 3, line 50) coupled to the switch, the third queue to hold a plurality of task identifiers (col. 4, lines 20-25) placed in the third queue by the switch and provide the task identifiers to a processing unit in the order task identifier were placed in the third queue by the service (col. 3, lines 50-53; col. 4, lines 20-25; col. 7, lines 56-65; col. 13, lines 15-21; col. 14, lines 10-12).

7. Miro does not explicitly teach a port to receive one or more data streams, each data stream including one or more data frames. However, AAPA teaches a port to receive one or more data streams, each data stream including one or more data frames (page 1 lines 16-21).

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8. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Miro and AAPA because AAPA's one or more data streams, each data stream including one or more data frames would increase the flexibility and speed of Miro 's system by include all the needed data streams to eliminate data flow bottlenecks or congestion.

9. Miro and AAPA do not explicitly teach the switch is couple to the first and second queue. However, Maeno teaches switch is couple to the first and second queue (col.1, lines 32-45; col. 2, lines 39-50; col. 10, lines 26-31).

10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Miro, AAPA and Maeno because Maeno's switch is couple to the first and second queue would improve the efficiency of Miro and AAPA' system by having a switching couple to the queues to provide more efficiency for controlling congestion or data flow bottlenecks methods.

11. As to claim 2, Miro teaches a classifier communicatively coupled to the port to assign one of plurality of priority types to every data frame received, the plurality of priority types including the first priority type and the second priority type (col. 3, lines 37-44; col.5, lines 11-22; col. 13, lines 60-65).

12. As to claim 6, Miro teaches a task router coupled to receive task identifiers from

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the task scheduler and the task identifiers in either the first or second queue (col. 14, lines 10-13).

13. As to claims 7, 17 and 29, Maeno teaches the task router is configured to monitor the first queue for an overflow condition and, if an overflow condition is detected, reassign data frame priority types to prevent overflow of the first queue (col. 8, lines 21-30).

14. As to claims 8-9, Miro teaches the switch is configured to retrieve task identifiers from the first and second queues in a fair and weighted manner according to priority types of the task identifiers (col. 3, lines 50-61; col. 7, lines 56-67; col. 14, lines 10-22).

15. As to claim 10, Miro teaches the third queue is a shared execution queue from which one or more processing units retrieve task identifiers to process (col. 1, lines 42-45).

16. As to claims 12, 14, 20 and 25, Miro teaches the task priority level is determined from the data frame type (col. 4, lines 50-66).

17. As to claims 18, 23 and 30, Miro teaches placing a plurality of the retrieved data frames into an execution queue to be processed (col. 1, lines 42-45; col. 3, lines 50-53; col. 4, lines 20-25; col. 14, lines 10-12).

18. As to claim 26, Miro teaches each storage queue stores data frames of a different task priority level than the other storage queues (col.4, lines 55-65).

19. Claims 3-5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miro (U.S. Patent 5,220,653) in view of Applicant Admitted Prior Art (AAPA), as applied to claims 1, 11, 19 and 24 above, and further in view of Maeno (U.S. Patent 4,942,569, and Sherrod (U.S. Patent 4,642,756).

20. Miro and Sherrod were cited in the last office action.

21. As to claim 3, it is rejected for the same reason as claim 1. In addition, Miro, AAPA and Maeno do not explicitly teach the look-up table communicatively coupled to the task scheduler and to the port, the look-up table to provide one of the first priority type and the second priority type to the task scheduler for every data frame received. However, Sherrod teaches the look-up table communicatively coupled to the task scheduler and to the port, the look-up table to provide one of the first priority type and the second priority type to the task scheduler for every data frame received (col. 3, lines 7-12 and lines 23-28; col. 4, line 8 – col. 5, line18).

22. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Miro, AAPA, Maeno and Sherrod because Sherrod's look-up table communicatively coupled to the task scheduler and to

the port, the look-up table to provide one of the first priority type and the second priority type to the task scheduler for every data frame received would increase the flexibility of Miro and AAPA's system by providing look-up table to provide one of the first priority type and the second priority type to the task scheduler for every data frame received to optimize the responsiveness of the computer to a set of interactive computer users.

23. As to claims 4 and 13, Sherrod teaches one of the first priority type and the second priority type is pre-assigned to the data stream (col. 3, lines 7-12).

24. As to claim 5, Sherrod teaches the conversions between priority types and data frame types are dynamically configured (col. 3, lines 23-28).

25. Claims 15-16, 21-22, 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miro (U.S. Patent 5,220,653) in view of Applicant Admitted Prior Art (AAPA), as applied to claims 1, 11, 19 and 24 above, and further in view of Maeno (U.S. Patent 4,942,569) and Beaulieu et al. (U.S. Patent 6,182,120).

26. As to claims 15, 21 and 27, Miro, AAPA and Maeno do not explicitly teach each data frame type corresponds to particular processing time requirements. However, Beaulieu teaches each data frame type corresponds to particular processing time requirements (col. 1, lines 50-51).

27. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Miro, AAPA, Maeno and Beaulieu because Beaulieu's each data frame type corresponds to particular processing time requirement would increase the flexibility of Miro and AAPA's system by provide each data frame type corresponds to particular processing time requirement to optimize to use of one or more processors.

28. As to claims 16, 22 and 28, Beaulieu teaches according to the weighted processing scheme, data frames of approximately equal total processing time restrictions are retrieved from each storage queue in a task retrieval cycle (col. 3, lines 11-25; col. 4, lines 30-52).

Response to the argument

29. Applicant's arguments filed 6/8/05 for claims 1-30 have been considered but are moot in view of the new ground(s) rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Camquy Truong whose telephone number is (571) 272-3773. The examiner can normally be reached on 8AM – 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3756.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIP. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIP system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

Camquy Truong

August 12, 2005



MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100